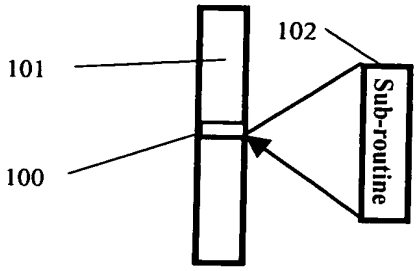


Fig1A

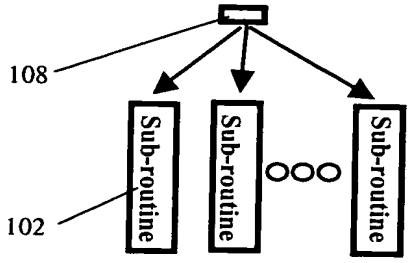


Fig1B

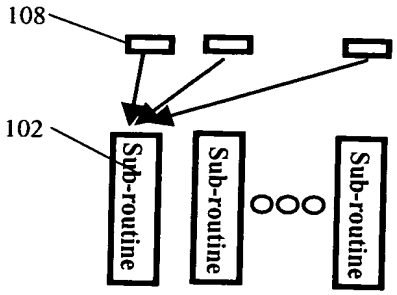


Fig1C

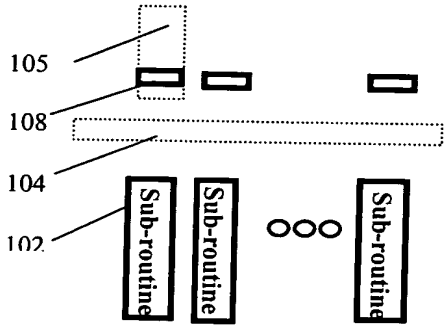


Fig1D

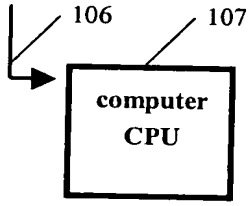


Fig1E

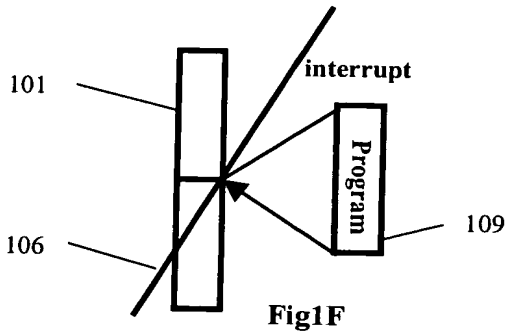


Fig1F

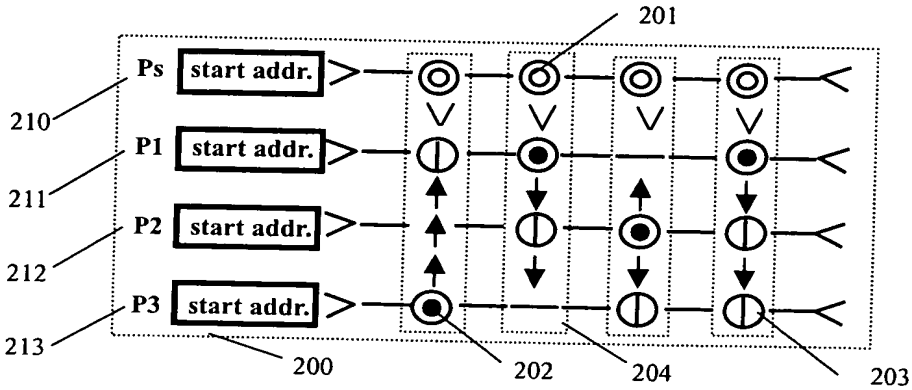


Fig 2A

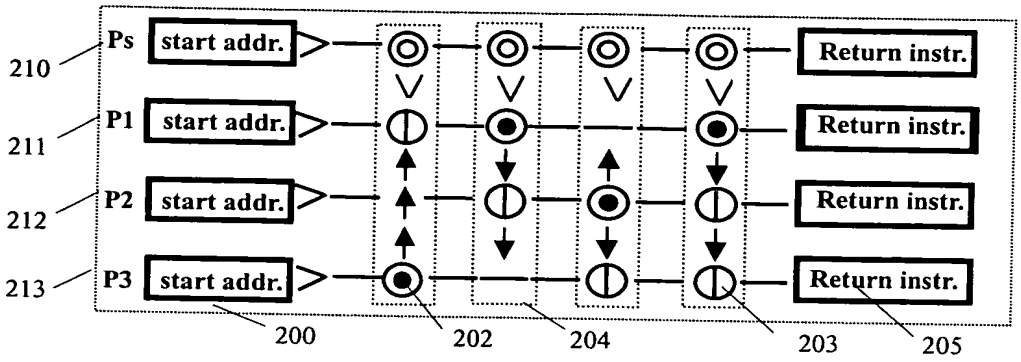


Fig 2B

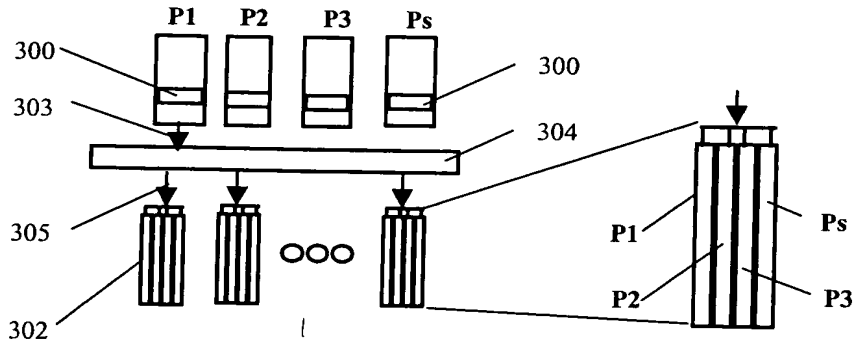


Fig 3A

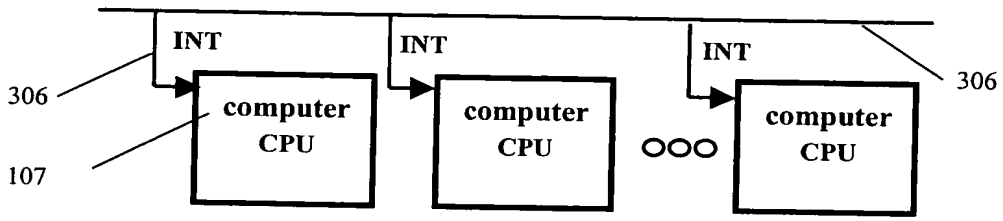


Fig 3B

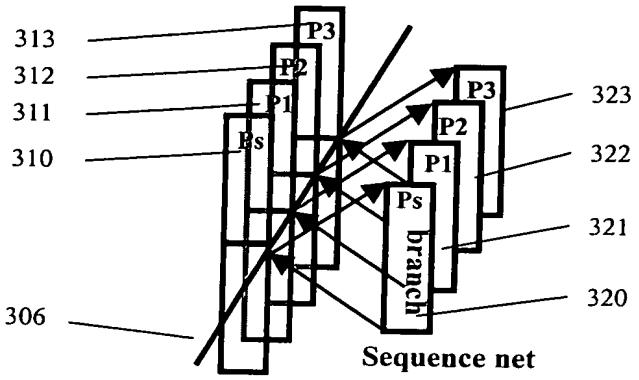


Fig 3C

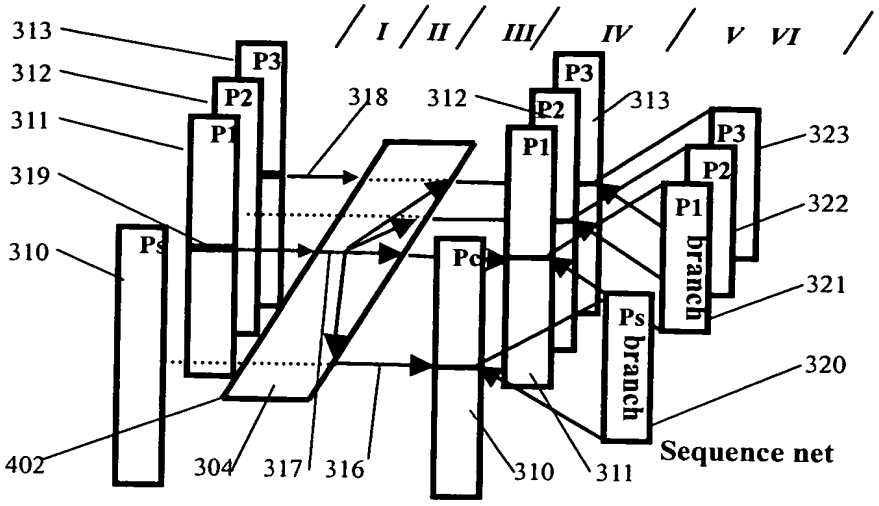


Fig 3D

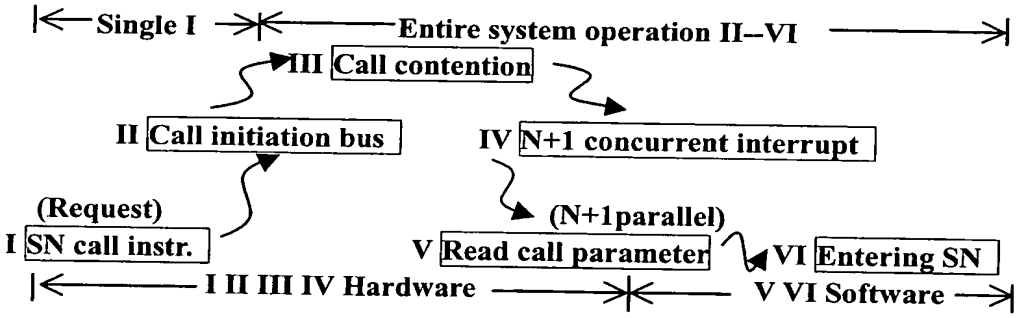


Fig.3E

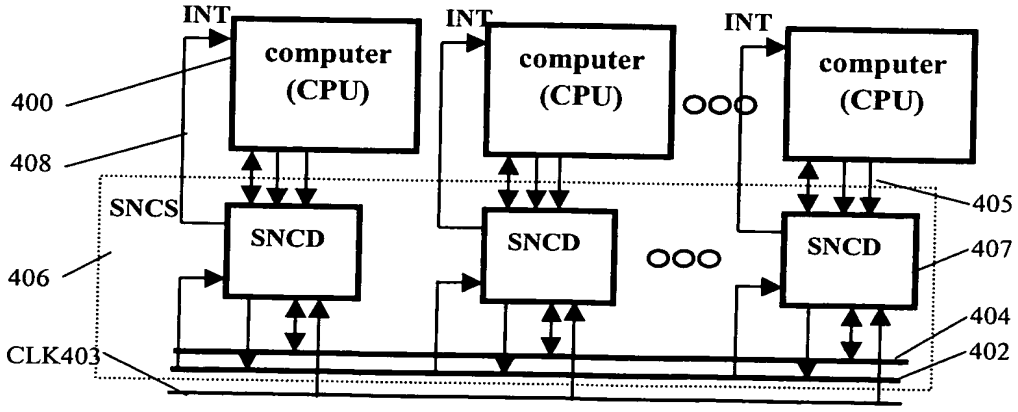


Fig.4A

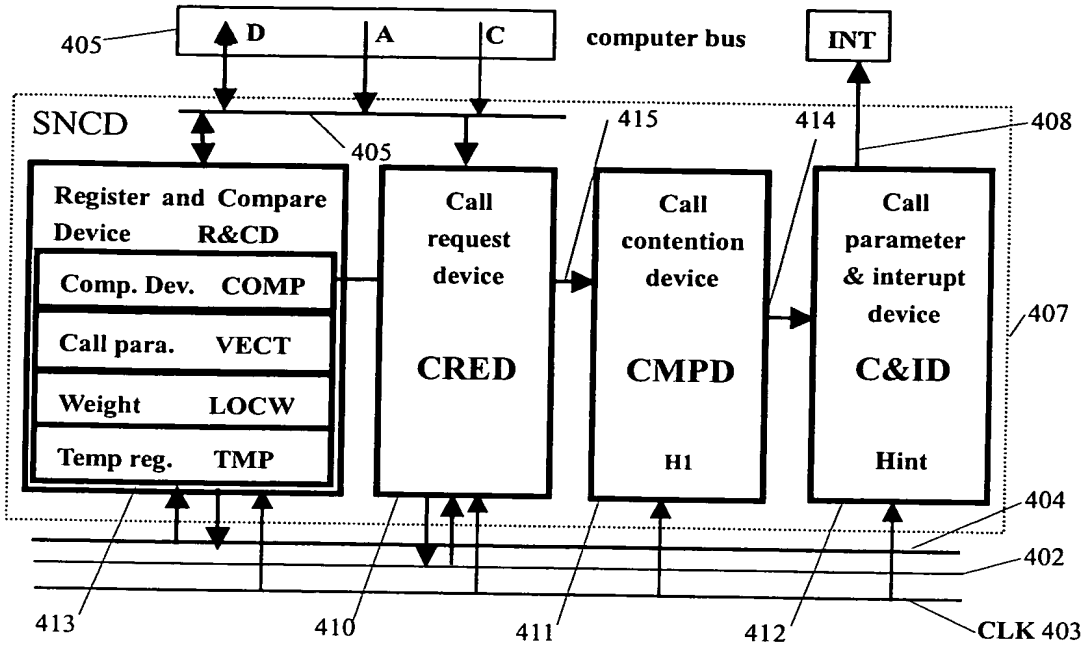
405
D
A
C
computer bus
INT
SNCD
405
415
414
408
Register and Compare Device R&CD
Comp. Dev. COMP
Call para. VECT
Weight LOCW
Temp reg. TMP
Call request device
CRED
Call contention device
CMPD
H1
Call parameter & interupt device
C&ID
Hint
407
404
402
413
410
411
412
CLK 403

Fig.4B

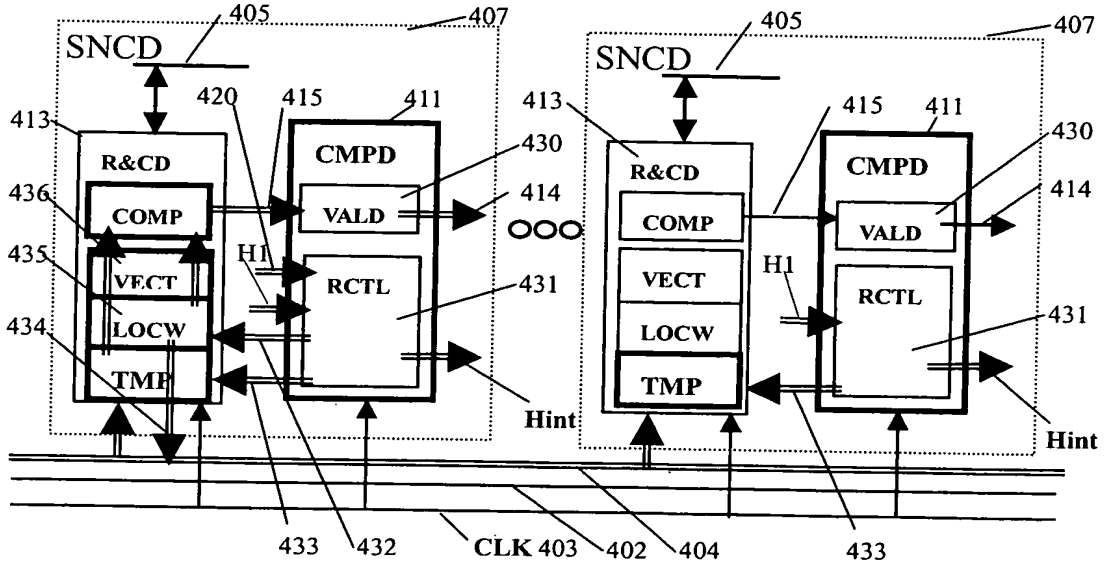
405
407
SNCD
420
415
411
413
R&CD
CMPD
430
436
COMP
VALD
414
435
VECT
H1
RCTL
431
434
LOCW
TMP
Hint
433
432
CLK 403
402
404
405
407
SNCD
413
415
411
R&CD
CMPD
430
COMP
VALD
414
VECT
H1
RCTL
LOCW
431
TMP
Hint
433

Fig.4E

In sequence net call, the operations of SNCDs at clock Hi

| I | II | | III | | IV | |
|---|---|---|---|---|---|---|
| | H0 | | H1 | | Hint | |
| | 1 | 0 | 1 | 0 | 1 | 0 |
| SNCD receives sequence net call instruction It is the request machine | sending initiation level to bus 402 | checking level from bus 402 for initiation of entire system | send weight of this machine to data bus | Read weight of entire system from data bus. Entering into temp. register, Compare with weight of this machine. HVBOR of temp. register is equal to weight of this machine, the call is valid. | Call of this SNCD is valid. Call parameter send to data bus. | Read data bus, enter in temp. register. Send interrupt level to computer connected with SNCD. |
| ditto | ditto | ditto | send weight of this machine to data bus | Read weight of entire system from data bus. Entering into temp. register, Compare with weight of this machine. HVBOR of temp. register is higher than weight of this machine, the call is invalid. | Call of this SNCD is invalid. Send 0000 to data bus. | ditto |
| Not request machine | no operation | ditto | send 0000 to data bus | Read weight of entire system from data bus, Entering into temp. register. No call request, no comparison. | Send 0000 to data bus. | ditto |

Fig.4C

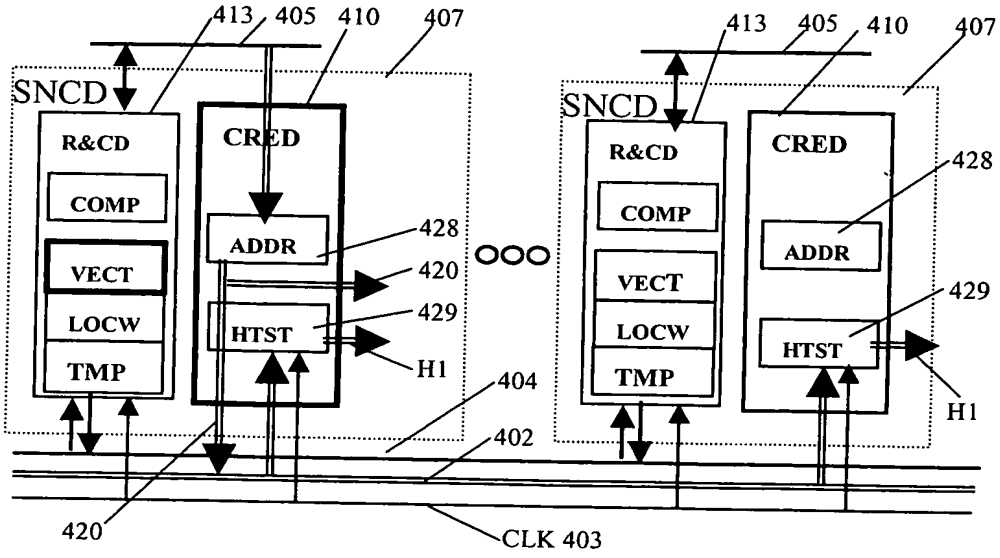


Fig.4D

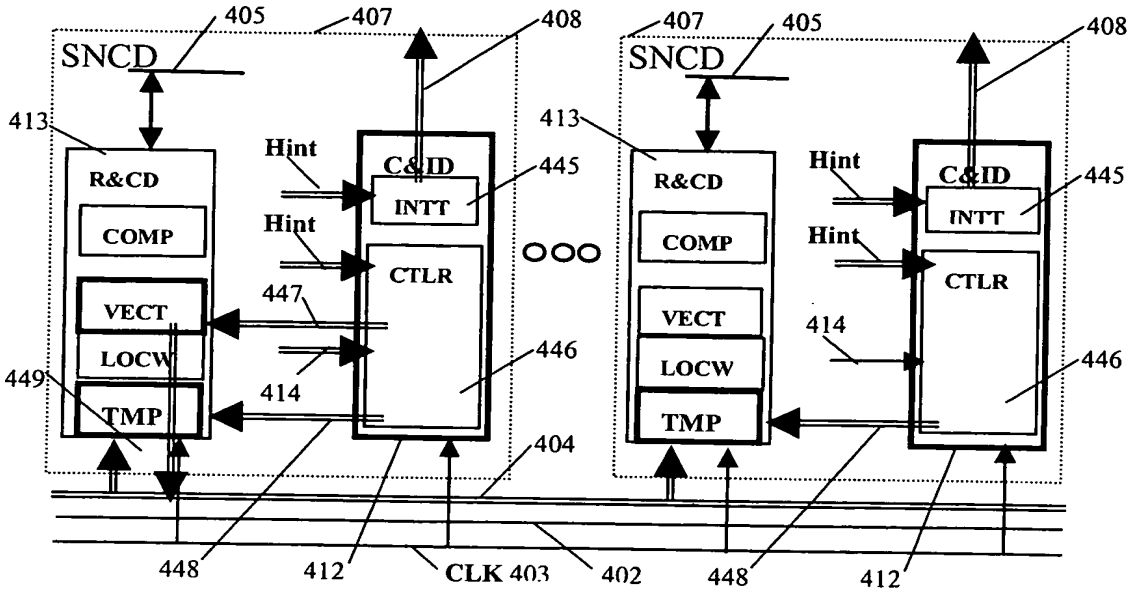
SNCD
405
407
408
413
R&CD
COMP
VECT
LOCW
TMP
449
Hint
Hint
C&ID
INTT
CTLR
445
447
414
446
404
448
412
CLK 403
402

Fig.4F

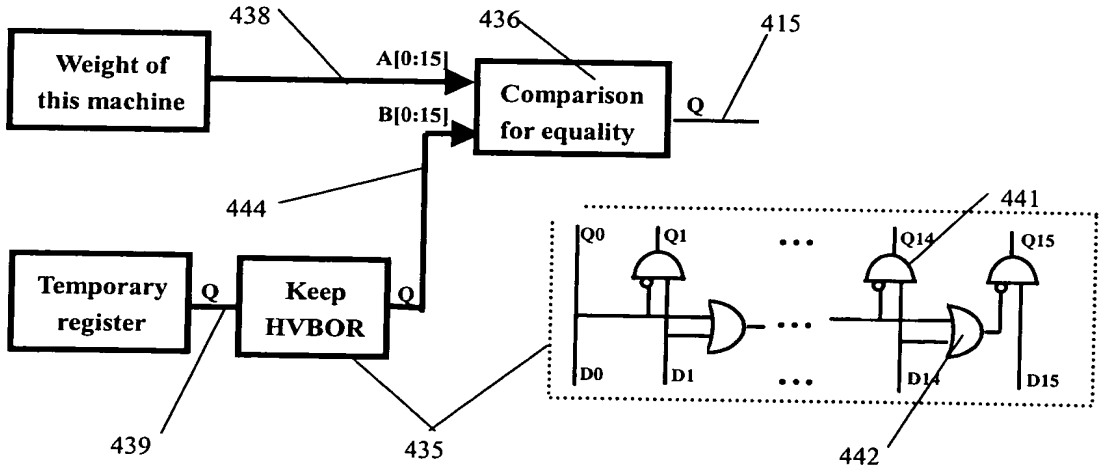
438
436
415
Weight of this machine
A[0:15]
B[0:15]
Comparison for equality
Q
444
441
Temporary register
Q
Keep HVBOR
Q
Q0
Q1
Q14
Q15
D0
D1
D14
D15
439
435
442

Fig.4G

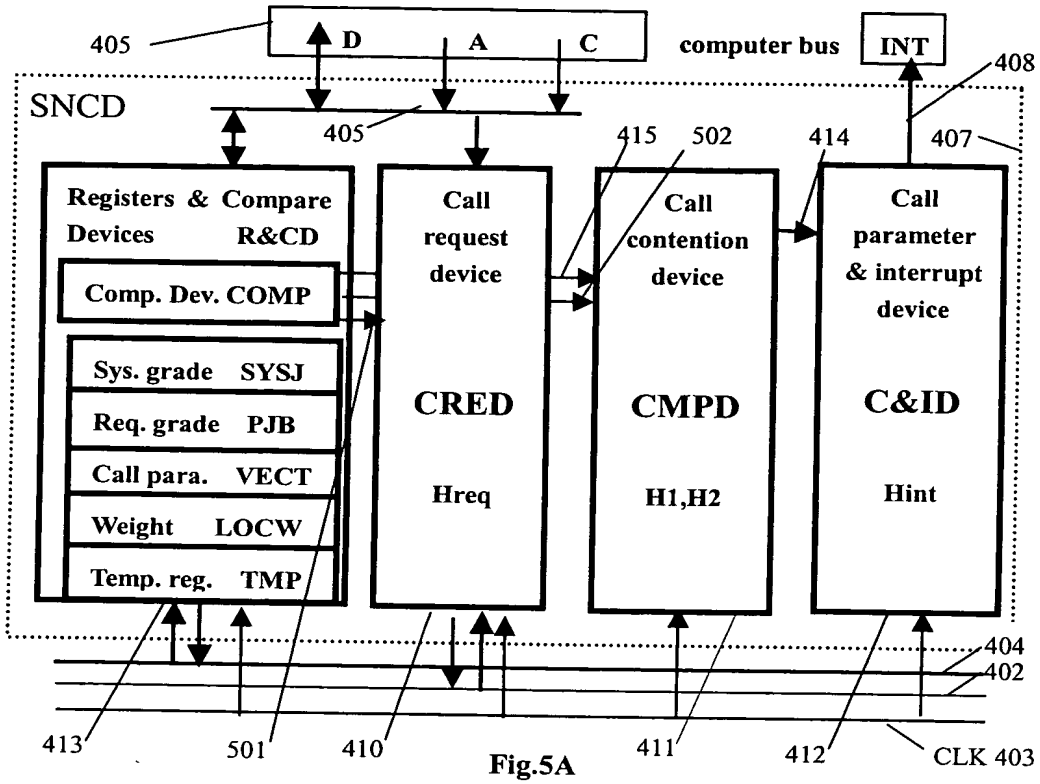


Fig.5A

In grade call of sequence net, the operations of SNCDs at clock H

| I | | | II | | III | | | | IV | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Hreq | | H0 | | H1 | | H2 | | Hint | |
| | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| SNCD receives sequence net grade call instruction of request machine | | Request grade greater than system grade, request valid | Initiation level to bus 402 | Check initiation level on 402, at leading edge | Send request grade to data bus | Read request grade of entire system from data bus. Send to temp register. Compare with request grade of this machine. The HVBOR are equal. Call valid. | Send weight of this machine to data bus. Write the HVBOR of temporary register into system grade register | Read weight of entire system from data bus. Send to temp. register. Compare with weight of this machine. The HVBOR are equal. Call valid. | SNCD valid. Send call parameter to data bus | Read data bus and send to temp. register. Send interrupt level to computer |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ditto | | Request grade greater than system grade, request valid | ditto | ditto | Send request grade to data bus | Read request call of entire system from data bus into temp. register. Compare with request grade of this machine. The HVBOR are equal. Call valid. | Send weight of this machine to data bus. Write the HVBOR of temp. register into system grade register | Read weight of entire system from data bus into temp. register. Compare with weight of machine. Weight of this machine is low. Call invalid | send 0000 to data bus | ditto |
| ditto | | Request grade greater than system grade, request valid | ditto | ditto | Send request grade to data bus | Read call request of entire system from data bus into temp. register. Compare with request grade of this machine. The HVBOR are not equal. Call invalid. | Send 0000 to data bus. Write the HVBOR of temp. register into system grade register. | Read the weight of entire system into temp. register. Already in status of invalid call. No further comparsion to be made | ditto | ditto |
| ditto | | Request grade smaller than system grade, request invalid | No operation | ditto | Send 0000 to data bus | Read request call of entire system from data bus. Send to temporary register. | ditto | ditto | ditto | ditto |
| SNCD is not request machine | | No operation | ditto | ditto | ditto | ditto | ditto | ditto | ditto | ditto |

Fig.5B

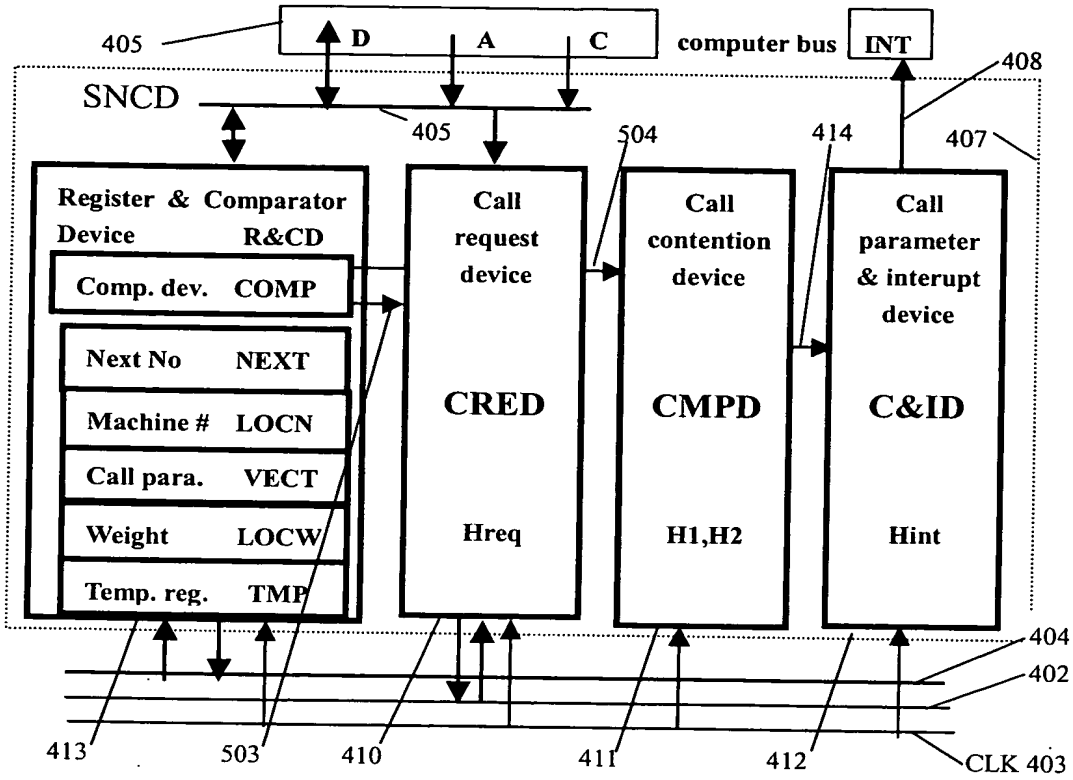
405
D
A
C
computer bus
INT
408
SNCD
405
504
414
407
Register & Comparator Device R&CD
Comp. dev. COMP
Next No NEXT
Machine # LOCN
Call para. VECT
Weight LOCW
Temp. reg. TMP
Call request device
CRED
Hreq
Call contention device
CMPD
H1,H2
Call parameter & interupt device
C&ID
Hint
404
402
413
503
410
411
412
CLK 403

Fig.5C

In sequence call of sequence net, operations of SNCDs at clock H

| I | | | II | | III | | | | IV | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Hreq | | H0 | | H1 | | H2 | | Hint | |
| | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| SNCD receive sequence net sequence call instruction, it is request machine | | Number of machine equal to number of NEXT, Call valid | Send initiation level to bus 402 | check for initiation level of entire system on 402 | Sequence call, send 0000 to data bus | Read Sequence features of entire system from data bus, Send 0000 to temp. register. Temp. register are zero. Type of sequence call | No operation | | SNCD valid Send call parameter to data bus | Read data bus. Send to temp. register. Send interrupt level to computer connected to SNCD. |
| SNCD receive sequence net sequence call instruction, it is request machine | | Number of this machine not equal to NEXT, Call invalid | No operation | Ditto | No sequence call, send 0000 to data bus | ditto | No operation | | SNCD invalid, send 0000 to data bus | Ditto |
| SNCD is not request machine | | No operation | ditto | Ditto | Ditto | ditto | No operation | | Ditto | Ditto |

Fig.5D